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## US6013823: Trans-pentavalent 2-15-deoxy-16-hydroxy-16-methyl-PGE1 methyl ester (

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Other patents from NEW PHARMA INTERNATIONAL COR. (approx. 1)

Issued/Filed Dates: Jan. 11, 2000 / July 31, 1997

Application Number: US1997000903782

iPC Class: C07F 007/08;

Class: <u>556/443</u>;

Field of Search: 556/443

Abstract: Analogs of the prostaglandin PGE, are disclosed. These compounds

exhibit uterotonic properties, enhancing the response to PGF<sub>2</sub> .alpha.

in isolated rat uteri. The compounds also exhibit other

pharmacological properties, as inhibitors of gastric acid secretion, hypotensives, and bronchodilators. Processes for making the analogs, useful intermediates, and pharmaceutical preparations are

also presented.

Darby & Darby;

Attorney, Agent, or

Primary/Assistant

Firm:

Examiners:

Shaver; Paul F.;

Related Applications:

Application Number	ApplDate	Patent	Issued	Title
US1993000072188	1993-06-04	US5817694	11 UUX11111h	16-methyl-11,16-dihydroxy-9-oxoprost-2 acid and derivatives

## U.S. References

(No patents reference this one)

Patent	Issued	Inventor(s)	Applicant(s)	Title
<u>US4190597</u>	2 /1980	Floyd, Jr. et al.	American Cyanamid Company	Various 15-deoxy-16-hydroxy-16- 16-ethynylsubstituted prostagland
US4529812	7 /1985	Collins et al.	G. D. Searle & Co.	3-Oxaprostaglandins
US4617411	10 /1986	Collins et al.	G. D. Searle & Co.	3-oxaprostaglandins
US5166174	11 /1992	Ueno et al.	K.K. Ueno Seiyaku Oyo Kenkyujo	Prostaglandins E and anti-ulcers same
<u>US5705659</u>	1 /1998	Park et al.	Korea Institute of Science and Technology	Intermediates for the synthesis of 16-phenoxy-prostatrienoic acid de a preparing method thereof

First Claim: Show all 2 claims

What is claimed is:

1. A compound useful as a precursor in the synthesis of compounds of the formula: [Fi which R represents  $C_1$  - $C_4$  alkyl groups of the methyl, ethyl or isopropyl types, represente formula: [Figure] in which R represents  $C_1$  - $C_4$  alkyl groups of the methyl, ethyl or isoprop  $R^9$  represents a bulky alkyl group or an aromatic one.

This is a division of application Ser. No. 08/072,188, filed Jun. 4, 1993, now U.S. Pat. N 5,817,694.

Background/Summary:

Show background/summary

Drawing Descriptions:

Show drawing descriptions

Description of Preferred Embodiments: Show description of preferred embodiments

Foreign References:

none

(No patents reference this one)

## Other References:

- D. van Dorp, Recent Developments in the Biosynthesis and The Analyses of Prost Unilever Research Laboratories Vlaardingen, The Netherlands, Annals New York. Sciences, Editors, pp. 182-199.
- Gilman, A.G. et al. (Eds.), The Pharmacological Basis of Therapeutics, 8th Edition 24, pp. 600-617, 911, 937-939.
- Von Priv.-Doz. Dr. H. Schmidbaur und cand. chem. Brunhilde Armer,
   Organogallogermoxane—Verbindungen mit der Struktureinheit Ga-O-Ge, Angew. (
   Jahrg, 1966, Nr. 5, pp. 305-306.
- Sih, C.J., et al., Total Synthesis of (±)-15-Deoxyprostaglandin E<sub>1</sub>, J.C.S. Chem. Cc pp. 240-241.
- Sammes, P.G., et al., On the Synthesis of Azetidines from 3-Hydroxypropylamines Soc., Chem, Commun., 1983; pp. 682-684.
- Ali, S.M., et al., Synthesis of Prostaglandin A<sub>2</sub> from 3-endo-Bromotricyclo [3.2.0.0<sup>2</sup> heptan-6-one, J.C.S. Chem. Comm., 1980, pp. 74-75.
- Ali, S.M., et al., Synthesis of 9-Deoxa-9, 10-dehydroprostaglandin-D<sub>2</sub> through Rea-2-Oxatricyclo[3.3.0.0<sup>4</sup> 6] oct-7-en-3-one with a Cuprate Reagent, J.C.S. Chem. Company of the second secon



- Brown, E.A., et al., A Short Synthesis of Prostaglandins from
   5-Chloro-5-cyano-7-syn-formylbicyclo[2,2,1]hept-2-ene, J.C.S. Chem. Comm. 197
- Dawson, M.J., et al., Reduction of Bicyclo [3.2.0]hept-2-en-6-one with Dehydrogen Enzymes in Whole Cell Preparations of some Fungi and Yeasts, J. Chem Soc. Pe 1983, pp. 2119-2125.
- Jones, G., et al., Stero-controlled Synthesis of Prostaglandin Synthons, J.C.S. Perpp. 1676-1683.
- Miller, J.G., et al., Highly Stereoselective Total Syntheses of Prostaglandins via Ste Sulfenate-Sulfoxide Transformations, J. Amer. Chem. Soc., 96:21, Oct. 16, 1974, 6774-6775.
- Trost, B.M., et al., New Synthetic Reactions. Oxidative Decarboxylation, J. Amer. Cl 97:12, Jun. 11, 1975, pp. 3528-3530.
- Corey, E.J., et al., Preparation of an Optically Active Prostaglandin Intermediate via Asymmetric Induction, pp. 6908-6909.
- Sih, C.J., et al., Total Synthesis of Prostaglandins II. Prostaglandin E<sub>1</sub>, Communica Editor, J. Amer. Chem. Soc., 94:10, May 17, 1972, pp. 3643-3644.
- Alvarez, F.S., et al., Synthesis of (±)-Prostaglandin E<sub>1</sub>,(±)-11-Deoxyprostaglandins (±)-9-Oxo-13-cis-Prostenoic Acid by Conjugate Addition of Vinylcopper Reagents, Chem. Soc. 94:22, Nov. 1, 1972, pp. 7823-7827.
- Kluge, A.F., et al., Synthesis of Prostaglandin Models and Prostaglandins by Conjunddition of a Functionalized Organocopper Reagent, J. Amer. Chem. Soc., 94:22, 1972, pp. 7827-7832.
- Corey, E.J., et al., Efficient Generation of the 15S Configuration in Prostaglandin S Attractive Interactions in Stereochemical Control of Carbonyl Reduction, J. Amer. ( 94:24, Nov. 29, 1972, pp. 8616-8618.
- Roberts, S.M., et al., Factors Influencing the Regioselectivity of Reactions Involving Organocuprate Reagents and Allyl Acylates: Synthesis of Some Phenylthioprostar Perkin I, 1981, pp. 1729-1733.
- Iguchi, S, et al., Diisobutylaluminum 2,6-Di-t-butyl-4-methylphenoxide, Novel Stere Reducing Atent for Prostaglandin Synthesis, Bull. Chem. Soc. Jpn., 54, 1981, pp. 3
- Noyori, R., Assymmetric Synthesis Via Axially Dissymmetric Molecules, A Binaphth Complex Aluminum Hydride Reagent Possessing Extremely High Ability of Chiral I Pure & Appl. Chem., vol. 53, 1981, pp. 2315-2322.
- Corey, E.J., et al., Stereo-Controlled Synthesis of Prostaglandins F<sub>2</sub>-alpha. and E<sub>2</sub>
   Amer. Chem. Soc., 91:20, Sep. 24, 1969, pp. 5675-5677.
- Corey, E.J., et al., Total Synthesis of Prostaglandins F<sub>1</sub> alpha., E<sub>1</sub>, F<sub>2</sub> alpha., and I Forms) from a Common Synthetic Intermediate, J. Amer. Chem. Soc., 92:8, Apr. 2 2586-2587.
- Corey, E.J., et al., Studies on the Total Synthesis of Gibberellic Acids, A Simple Ro Tetracarbocyclic Network, J. Amer. Chem. Soc., 92:2, Jan. 28, 1970, pp. 396-397.
- Finch, M.A.W., et al., Synthesis of Prostaglandin A<sub>2</sub> through Reaction of 3-endo-Bromo-tricyclo[3.20.0<sup>2</sup>.7]heptan-6-one with a Cuprate Reagent, J.C.S. Pepp. 1725-1728.
- Chapleo, C.B., et al., Total Synthesis of Prostaglandin A<sub>2</sub> involving the Reaction of Heterocuprate Reagent with an Allyl Epoxide, J.C.S. Perkin I, 1980, pp. 2084-2087
- Horsewood, P., et al., Preparation and Dienophilic Reactions of Nitrosyl Cyanide, J. 1980, pp. 1587-1591.
- Howard, C.C., et al., Total Synthesis of Prostaglandin-F<sub>2</sub>.alpha. involving Stereoco Photo-induced Reactions of Bicyclo[3.2.0]hepatones, J.C.S. Perkin I, 1980, pp. 85.
- Lee, T.V., et al., Preparation and Some Reactions of 3-endo-Substituted Tricyclo[3] heptan-6-ones, J.C.S. Perkin I, 1978, pp. 1179-1182.
- Lee, T.V., et al., Total Synthesis of Prostaglandin-F<sub>2</sub>.alpha. through Homoconjuga of an Organocuprate Reagent to a Tricyclo[3.2.0.0<sup>2</sup>.7]heptanone, J.C.S. Perkin I, 1176-1178.
- Brown, E.D., et al., The Acetoxyfulvene Synthesis of Prostaglandins. Part I. synthes Corey Aldehyde, J.C.S. Perkin I, 1978, pp. 1507-1510.



- Corey, E.J., et al., New Reagents for Stereoselective Carbonyl Reduction. An Imp Synthetic Route to the Primary Prostaglandins, J. Amer. Chem. Soc., 93:6, Mar. 24 1491-1493.
- Corey, E.J., et al., A New Method for the 1,4 Addition of the Methylenecarbonyl Un CO-) to Dienes, J. Amer. Chem. Soc., 93:17, Aug. 25, 1971, pp. 4326-4327.
- Spurlock, L.A., et al., The Nature of the Carbonium Ion. VII. The Dehydronorborny from Thiocyanate Isomerizations, J. Amer. Chem. Soc., 93:1, Jan. 13, 1971, pp. 1-
- House, H.O., et al., The Chemistry of Carbanions. XII. The Role of Copper in the C Addition of Organometallic Reagents, The Chemistry of Carbanions, XII, Oct. 1966 3128-3141.
- Kluge, A.F., et al., Synthesis of 13-cis-Prostaglandins via a Highly Stereoselective of Addition with a Functionalized Organocopper Reagent, J. Amer. Chem. Soc., 94:2 1972, pp. 9256-9258.
- Corey, E.J., et al., Mixed Cuprate Reagents of Type R<sub>1</sub> R<sub>2</sub> CuLi Which Allow Selector
   Transfer, J. Amer. Chem. Soc., 94:20, Oct. 4, 1972, pp. 7210-7211.
- Corey, E.J., et al., Total Synthesis of Prostaglandins E<sub>2</sub> F<sub>2</sub>.alpha. (dl) Via a Tricarb Intermediate, Tetrahedron Letters No. 4, 1978, pp. 307-310.
- Just, G., et al., A Prostaglandin Synthesis, Tetrahedren Letters No. 22, 1967, pp. 2
- Cameron, A.G., et al., Total Synthesis of Prostaglandin D<sub>1</sub> Methyl Ester and
   9-EPI-Prostaglandin D<sub>1</sub> Methyl Ester, Tetrahedron Letters vol. 23, No. 5, 1982, pp.
- K. Kiec-Kononowicz et al., Reaction of 5,5-diphenyl-2-thiohydantoin with 1,3-dibror Under Phase Transfer Catalytic Conditions, Tetrahedron vol. 37, 1981, pp. 409-41
- Lish, P.M., et al., Pharmacology of Methdilazine (Tacaryl(R)), Arch int. pharmacod No. 1-2, 1960, pp. 77-107.
- Suzuki, M., et al., A General Synthesis of Primary Prostaglandins, Tetrahedron Let No. 52, 1982, pp. 5563-5566.
- Nelson, N.A., Prostalandin Nomeclature, Journal of Medicinal Chemistry, 1974, vo pp. 911-918.
- Takano, S., et al., A New Prostaglandin Synthon from the 4-Oxatricyclo[4.3.0.0<sup>3</sup>.7 System. A Total Synthesis of (±)-Prostaglandin F<sub>2</sub>.alpha., Chem. Pharm. Bull. 27(\*pp. 2582-2588.
- Peel R., et al., An Alternative Synthesis of the Corey Prostaglandin Aldehyde, J.C.: Comm., 1974, pp. 151-153.
- Dajani, E.Z., et al., Effects of E Prostaglandins, Diphenoxylate and Morphine on Int Motility In Vivo, European Journal of Pharmacology, 34, 1975, pp. 105-113.
- Dunham, N.W., et al., A Note on a Simple Apparatus for Detecting Neurological D and Mice, J. Amer. Pharm. Assoc., vol. XLVI, No. 3, Scientific Edition, Mar. 1957, p.
- Armitage, A.K., et al., Thioxanthines with Potent Bronchodilator and Coronary Dilat Properties, Brit. J. Pharmacol., 16, 1961, pp. 59-76.
- Litchfield, Jr., J.T., et al., A Simplified Method of Evaluating Dose-effect Experimer Pharm. Exp. Ther., 96, 1949, 99-113.
- Caton, M.P.L., et al., Synthesis of Classical Prostaglandins, in Chemistry of the Pro and Leukotrienes, Advances in Prostaglandin, Thromboxane, and Leukotriene Res 14, 1985, pp. cover, 73-129.



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